

BULLIED, Neil J.  
Appl. No. 10/632,847  
June 11, 2007

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-27 (Cancelled).

28. (Currently Amended) A method of producing a first procollagen comprising expressing in a cell, that expresses and assembles a second procollagen, a nucleic acid sequence(s) that encode(s) pro- $\alpha$  chains for assembly into said first procollagen, wherein said nucleic acid sequence(s) do not encode pro- $\alpha$  chains that co-assemble with pro- $\alpha$  chains that assemble to form said second procollagen, wherein at least one of said pro- $\alpha$  chains for assembly into said first procollagen comprises:

- i) a first moiety having activity for assembly into a trimeric procollagen C-propeptide and being from a first type of pro- $\alpha$  chain, wherein said first moiety contains a recognition sequence for chain selection, and;
- ii) a second moiety containing a triple helix forming domain from a pro- $\alpha$  chain different from said first type,

said first moiety being attached to said second moiety so that said recognition sequence permits co-assembly of said pro- $\alpha$  chain for assembly into said first procollagen with other pro- $\alpha$  chains having said activity for assembly into a trimeric procollagen C-propeptide and a triple helix forming domain, whereby said first procollagen is produced.

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29. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:1.

30. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:2.

31. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:3.

32. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:4.

33. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:5.

34. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:6.

35. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:7.

36. (Previously Presented) The method according to claim 28, wherein the recognition sequence comprises the amino acid sequence shown in SEQ ID NO:8.

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37. (Currently Amended) The method according to claim 28 wherein said first type and second types of pro- $\alpha$  chain and said pro- $\alpha$  chain different from said first type chains are selected from the group consisting of the pro $\alpha$ 1(I), pro $\alpha$ 2(I), pro $\alpha$ 1(II), pro $\alpha$ 1(III), pro $\alpha$ 1(V), pro $\alpha$ 2(V), pro $\alpha$ 1(XI) and pro $\alpha$ 2(XI).

38. (Previously Presented) The method according to claim 37, wherein the nucleic acid sequence encodes a modified pro $\alpha$ 2(I) chain in which the recognition sequence of the pro $\alpha$ 2(I) chain has been substituted by the recognition sequence of a pro $\alpha$ 1(III) chain.

39. (Previously Presented) The method according to claim 28, wherein said nucleic acid sequence is incorporated within a vector.

40. (Previously Presented) The method according to claim 39, wherein said vector is a plasmid, cosmid or phage.

41. (Previously Presented) The method according to claim 28, wherein said cell is a eukaryotic cell.

42. (Previously Presented) The method according to claim 41 wherein the cell is a yeast, insect or mammalian cell.

43. (Previously Presented) The method according to claim 42 wherein said cell is a mammalian cell.

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44. (Previously Presented) The method according to claim 43 wherein said mammalian cell is selected from the group consisting of Baby Hamster Kidney cells, Mouse 3T3 cells, Chinese Hamster Ovary cells, and COS cells.

45. (Withdrawn) The method according to claim 28, wherein said cell is present in a transgenic plant or non-human animal.

46. (Withdrawn) The method according to claim 45, wherein said cell is present in non-human placental mammal.

47. (Withdrawn) The method according to claim 46, wherein said placental mammal is selected from the group consisting of cattle, sheep, goats, water buffalo, camels and pigs.